FHWA Approaches for Stakeholder Involvement

The Agency commits to engaging stakeholders during each phase of the R&T process. Understandably, the appropriateness and level of stakeholder engagement will vary by program area and individual R&T project size and complexity. The details of stakeholder engagement for the various phases of the R&T process are:

- ***R&T Policy Setting***
  select representatives from State and local policymakers, program technical experts, and end users. This will provide input for FHWA's consideration in policymaking decisions.
- ***Agenda-Setting and Multiyear Plan Development (Applied/Advanced)***
  select representatives from the management, technical, academic, and end-user communities.
    - Identify program and technical experts.
    - Assist in gathering data and information on current and completed R&T.
    - Analyze current position of stakeholders and identify problems and scope.
    - Assist in defining criteria for ranking problems.
    - Prioritize needs and validate results ("reality check").
    - Assist in developing multiyear plans.
    - Assist in developing R&T implementation plans, such as Technology Facilitation Action Plans (TFAP).
- ***Scoping and Merit Review (Applied /Advanced)***
  select representatives from the management, technical, and end-user communities.
    - Assist in developing Statements of Work and Requests for Proposals on all major projects and-to the maximum extent practicable-on other research projects, including proposals for university research.
    - Assist in establishing performance measurement criteria and evaluate the outcome and/or performance of R&T activities.
    - Assist in "next step" options/decisions.
- ***Execution, Development, and Evaluation (Applied)***
  select reviewers/evaluators with specific expertise in/knowledge of the research problems and methodologies from the technical and end-user communities.
    - Assist in reviewing, evaluating, and comparing the research with the desired or intended outcome as stated in the Requests for Proposals, throughout execution.
    - Recommend deployment or termination of research.
    - Recommend the necessary adjustments to innovation or technology to achieve successful transfer to the customer(s).
    - Assist in refining implementation plans.
- ***Deployment (Applied)***
  select representatives for the specific technology or innovation from the end-user and technical communities.
    - Assist in completing and carrying out the implementation plan; become champions and agree to pilot a specific innovation or technology.
    - Assist in determining the best avenue for deploying a specific innovation or technology for each customer.
    - Assist in evaluating a specific technology or innovation (track progress and measure results) and recommend revisions to ensure full-scale implementation. This will include consideration of technologies and innovations from other sources, such as from the FHWA International Scanning Program, international technical exchange programs, Federal agencies, State DOTs, universities, and local agencies.
- ***Implementation (Applied)***
  select representatives for the specific technology or innovation from the end-user and technical communities.
    - Assist in identifying potential stakeholders for further implementation.

    - Assist in "telling the story" of the technology or innovation.
    - Assist in outreach activities (education, training, and presentations).
    - Assist in the evaluation of research (on the project and program levels) related to the intended outcomes.
- ***Evaluation (Applied)***
  select representatives from the management, technical, and end-user communities.
    - Assist in evaluating research (merit review) on the program and Agency levels.
    - Communicate to the sponsors of research programs the nature of and the rationale for investing in transportation research activities.
- ***Execution and Project Monitoring (Advanced)***
  select representatives from technical and end-user communities.
    - Monitor and review research at periodic intervals (the criteria and timeframes are established during Request for Proposal development).
    - Recommend "next step" options, such as, continue research "as is;" revise, revamp, or cancel research; and/or identify any components ready for deployment.
- ***Evaluation (Advanced)***
  select representatives from the technical and end-user communities.
    - These representatives would assist in evaluating research on the project and program levels.

      Program-level evaluations would be conducted on a periodic basis. The program evaluation would address:

        - Quality of overall research project outcomes in addressing initial needs.
        - Extent that program cycle met the needs of the program areas as originally defined.

---

1 The term "R&T Program" is used in the Plan to refer to the combined responsibility and actions of Congress, the Administration, and FHWA in funding highway research, determining research needs, setting research program priorities, executing the research, and deploying/implementing technologies and innovations. Technologies and innovations include procedures, practices, processes, products, and/or techniques.

2 The FHWA R&T framework for applied and advanced research consists of eight elements:

Policy Setting refers to the FHWA R&T policy-setting process.
Agenda Setting and Multiyear Plan Development refers to establishing program area agendas (that include understanding the current R&T development, identifying and prioritizing current needs, and verifying needs) and the development of multiyear plans to carry out the program area agendas.
Scoping and Merit Review refers to using merit review (peer panels) for establishing research project Statements of Work, Requests for Proposals, performance measures, and proposal evaluations.
Execution, Development, and Evaluation (Applied) refers to executing the research project and/or developing the research product, along with evaluating current and completed research.
Deployment (Applied) refers to piloting, showcasing, or demonstrating a technology or innovation (field testing) where the technology or innovation has the potential to become state-of-the-art. This element includes recommending technology or innovation revisions or modifications before implementation.
Implementation and Evaluation (Applied) refers to deploying on a full- or wide-scale basis a technology or innovation to become state-of-the-practice, and evaluating the effectiveness on

project and program levels.
Execution and Project Monitoring (Advanced) refers to executing the research project or developing the research technology. Project monitoring is conducted throughout the research project.
Evaluation (Advanced) refers to evaluating research on both the project and program levels to ensure that research is conducted in a quality manner and that the research is relevant (meets program goals/objectives).

3 Applied research is problem-solving research that addresses a defined need with a specific outcome that can be readily implemented.

4 Advanced research is research that involves and draws upon basic research results to provide better understanding of problems and that develops innovative solutions. Advanced research is sometimes referred to as exploratory research to convey its more fundamental character, its broader objectives, and the greater uncertainty in expected outcomes compared to problem-solving research.

5 Transportation Research Board, Special Report 261: The Federal Role in Highway Research and Technology, National Research Council, Washington, DC, 2001.